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news letter —

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U. S. D. A.



Vol. I.

January, 1939

No. 1.

ANNOUNCING
A DOUBLE HEADER

Beginning with this issue the News Notes formerly issued by the Bureau of Chemistry and Soils and the Monthly News Letter of the Bureau of Agricultural Engineering are combined into a joint News Letter. The News Letter should consist largely of informative items relating to the work of the various divisions, not merely records of the movements of individuals between field offices and Washington or from one location in the field to another. What is wanted is matters of interest to the personnel learned in the course of a trip, facts obtained in the course of an investigation and valuable experiences in administration. In order to keep the News Letter within reasonable limits as to size, strictly personal items will not be included. The cooperation of the staff of each Bureau and all divisions in furnishing items is necessary if the News Letter is to serve the best purpose. It will be issued about the 20th of each month and all matter should be in the editorial and information offices not later than the 15th of each month.

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Regional Laboratories

On December 14 Secretary Wallace announced that the four regional research laboratories authorized by the last Congress will be located at Peoria, Ill., New Orleans, La., Philadelphia area and San Francisco Bay area, representing the northern, southern, eastern, and western regions, respectively.

The research to be carried on will have as its objective the development of new and extended outlets and markets for the main surplus agricultural commodities of the country. Basic research on constituents common to agricultural commodities, such as starch, cellulose, protein, and oil will be carried on, as well as studies looking toward the possibilities of utilizing the commodities themselves.

The Agricultural Adjustment Act of 1938 authorized the expenditure of not more than four million dollars this fiscal year to establish the laboratories. Plans for the buildings to house the laboratories are under way and construction will be started before the end of the fiscal year.

The directors of the laboratories, as announced by Dr. Henry G. Knight, are as follows:

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|----------------------------|---|----------------|
| Northern, Peoria, Ill. | - | O. E. May |
| Southern, New Orleans, La. | - | D. F. J. Lynch |
| Eastern, Philadelphia, Pa. | - | P. A. Wells |
| Western, Albany, Calif. | - | T. L. Swenson |

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C. E. Sando, senior biochemist, won third prize in the scientific group of exhibits of the 3rd Annual Competition sponsored by the Modern Plastics Magazine, a trade journal, for his exhibit of agricultural and biological specimens embedded in methacrylate resin. The award was made to the Bureau and to Dr. Sando in the form of an all-plastic plaque appropriately engraved. The exhibit consisted of 24 specimens, designed, cast and machined by Dr. Sando, includes an ear of corn, spray of wheat, flowers, butterflies, all of which retain their natural size, color, and shape. The method of mounting developed by Dr. Sando after many difficulties permits the specimens to be encased intact in solid, glass-clear methacrylate plastic where they may be viewed from any angle. It is believed that specimens so preserved will possess considerable value as permanent records of both healthy and abnormal specimens in scientific research and for exhibition and other educational purposes.

In the past biological and botanical specimens have been preserved by pressing and drying or by immersing in liquids. The first of these methods presents two disadvantages, the loss of natural color and the fragility of the specimens. The second method permits the natural color to be preserved for only a limited period.

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Dr. Henry G. Knight, Chief of the Bureau of Chemistry and Soils, returned January 9 from a trip of inspection of the sites for the Regional Research Laboratories at Berkeley, New Orleans, and Peoria. He inspected the site in Philadelphia January 11..

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Henry A. Donovan, Assistant to the Chief of Bureau, visited the Regional Soybean and Industrial Products Laboratory at Urbana, Illinois, January 6-9, to make arrangements for certain adjustments in the handling of the business operations at the Soybean Laboratory and at the new Regional Research Laboratory to be established at Peoria, Illinois.

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Chas. A. Bennett, of the Cotton Ginning Laboratories, Stoneville, Miss., in company with J. S. Townsend of the Bureau of Plant Industry, spent the week of January 9 in Stillwater, Oklahoma, inspecting the gins belonging to the A & M College there and assisting them to get their roller gins into first class condition.

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The American Engineering Council held its annual meeting in Washington January 12 to 14. S. P. Lyle of the Bureau of Agricultural Engineering, president of the American Society of Agricultural Engineers, L. J. Fletcher, permanent representative, and Raymond Olney, secretary, attended the sessions. A number of District of Columbia members attended the annual banquet.

The District of Columbia section of the A.S.A.E. met on the evening of January 11, for a dinner at which a number of out-of-town guests were entertained and addressed the group.

During January Professor W. T. Ackerman of the University of New Hampshire and T. E. Heinton of Purdue University were employed by the Bureau to visit State agricultural colleges and interview experiment station workers and others on the status of rural electrification investigations.

At the annual conference of the Rural Electrification Administration staff on January 12, Mr. Lyle gave a paper entitled "Paying Uses for Electricity on Farms".

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The fifth regular meeting of the Washington, Maryland Microchemical Society was held in the Chemistry Building at the University of Maryland on December 15, 1938. The meeting was addressed by Dr. A.H. Corwin of Johns Hopkins University on the subject "Reinvestigations of Certain Microchemical Manipulations." Preceding the meeting, the following officers were elected for 1939: Chairman, Joseph R. Spies; Vice Chairman, Louise Kelly; Secretary, V. A. Conard; Executive Committee, N.L. Drake, M. S. Sherman, W. T. Haskins, C. J. Rodden.

Membership in this Society is open to all having an interest in microchemistry. The dues are \$2.00 per year. Application for membership may be made directly to the Secretary or through any of the above named officers.

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The 54th meeting of the Association of Official Agricultural Chemists was held at the Raleigh Hotel, Washington, D. C., Nov. 14-16, inclusive. Attendance at the meeting was the largest in the history of the Association, the registration being 553. Over 200 reports and papers were presented. The Wiley Memorial Address was delivered by a former Bureau of Chemistry employee, Dr. L. M. Tolman, Research Director, Wilson & Co., Inc., Chicago, Ill., his subject being "The History and Development of Food Inspection in the United States." Dr. H. R. Kraybill of Indiana, President of the Association, discussed in his address "Chemistry and the Utilization of Agricultural Products."

The following officers were elected for 1939: W. S. Frisbie of the Food and Drug Administration, President; L. B. Broughton of Maryland, Vice President; W. W. Skinner of the Bureau of Chemistry and Soils, Secretary-Treasurer. Additional members comprising the Executive Committee are J. W. Sale of Washington, D. C., G.G. Frary of South Dakota, J. O. Clarke of Chicago, and H. R. Kraybill of Indiana.

George P. Wolf, administrative officer of the Bureau of Agricultural Engineering, has been selected for the position of business manager of the Regional Research Laboratory at Philadelphia, Pa., and A. P. Aanestad of the administrative staff of the Bureau of Chemistry and Soils for business manager of the Laboratory at Albany, California.

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Division of Structures

In connection with the study of methods to abate the smoke nuisance in orchard heating, A. H. Senner has gone to Davis and Riverside, Calif., to confer with members of the Agricultural Engineering Department of the University of California and to set up field tests for the two types of atomizing burners for orchard heating which have been developed at the Baltimore laboratory. Laboratory tests and preliminary field tests were made at Baltimore.

As a supplement to the observations on change in weight of corn exposed to atmospheric conditions in several States and to determine the necessary relations governing moisture transfer, a series of tests of equilibrium moisture contents at varying temperatures and humidities is being started by Bureau of Agricultural Engineering workers at Arlington Experiment Farm in the cold storage laboratory of the Bureau of Plant Industry. Results of these studies are to be used in connection with Weather Bureau data to predict what moisture contents of corn may be expected under the atmospheric conditions encountered in the various parts of the country.

J. R. Dodge has gone to Madison, Wisconsin, to work with Max J. LaRock of the University of Wisconsin, and Oscar Shivers and Miss Juliette Mayer of this Bureau in obtaining the remaining field data in the comfort studies of Wisconsin farmhouses, and in making final arrangements for publication of a bulletin covering these studies. Mr. Dodge will also cooperate with Mr. LaRock in obtaining photographs which may be used in these publications, and with Mr. LaRock and J. P. Ditchman of the Illuminating Engineering Society, in obtaining photographs to illustrate the bulletin being prepared on Light for the Farm.

The principles of control of atmospheric moisture in potato storages which A. D. Edgar has worked out in Maine and Michigan are to be demonstrated by a working model at the Michigan State College Farmers' Week, January 30 to February 3. One side of the model will be of glass and by use of ice on the other sides the principles of controlling condensation by allocation of the insulating material will be demonstrated.

As part of the grain storage work of the Bureau of Agricultural Engineering, a resurvey of corncribs in Minnesota, Iowa, Illinois, and Indiana, is now under way. Samples of shelled corn are taken from inside the cribs with a spiral probe, and tested for moisture content, damage, test weight and other factors to determine change from condition at time of storage. Twenty to twenty-five cribs in each of eleven counties are included in this resurvey. The work under the direction of Dr. H. J. Barre, is being conducted by Thayer Cleaver in Indiana and Illinois, and T. R. Connor in Iowa and Minnesota.

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Chemical Engineering Research Division

David J. Price, Chief of the Chemical Engineering Research Division spent several days in early October conferring with Pennsylvania State officials regarding plans for firemen training programs. He also addressed the Pennsylvania State Firemen's Association at Lebanon, Pa., on "A National Program of Dust Explosion and Fire Prevention in Handling, Harvesting, Milling, and Storing of Agricultural Products." On October 5 Dr. Price spoke before a group of business and industrial executives at the Lions' Club in Lebanon, Pa.

Dr. Price left Washington on November 27 for Chicago where he attended the annual meeting of the Farm Fire Protection Committee of the National Fire Protection Association and the winter meeting of the Agricultural Committee of the National Fire Waste Council.

Dr. Price also attended a meeting in Chicago of the special committee of the National Fire Protection Association designated to prepare a model law for the inspection of rural electrical installations. This committee, consisting of representatives of all interested agencies, prepared a draft to be submitted to the National Fire Protection Association for tentative adoption at the annual meeting in Chicago next May.

From Chicago Dr. Price went to Boston to be present at a meeting of the Advisory Committee of the National Fire Protection Association.

Hylton R. Brown, spent the period from October 10 to 19 in Chicago Kankakee, Ill., and Milwaukee, Wis. In Chicago he conferred with members of the Dust Explosion Hazards Committee of the National Fire Protection Association concerning a safety code for the prevention of dust explosions in country grain elevators. He talked with officials of the Corn Products Refining Company and Underwriters' Laboratories in regard to a series of tests to determine effective methods of providing for the prevention of explosion propagation through conveyor lines in industrial plants. In Kankakee Mr. Brown inspected the new corn mill erected by General Foods Corporation, and in Milwaukee he inspected the new corn mill which the Krause Milling Company has recently completed to replace the one destroyed by a dust explosion and fire two years ago. Mr. Brown found that many recommendations made by the Bureau for protection against explosions had been incorporated in the new plant.

Mr. Brown was in New York City October 25 and 26 where he attended a meeting of the American Standards Association committee on Conveyors and Conveying Equipment. Particular attention was given to the preparation of a code covering the safe design, installation, and operation of all types of conveying machinery. He also had a number of conferences with officials of the National Board of Fire Underwriters concerning blower regulations, and the meeting of the Dust Explosion Hazards Committee to be held in New York in January. In New York again in early December he attended a meeting of the Safety Code Committee on Conveyors and Conveying Equipment, and meetings of the American Society of

Mechanical Engineers. He addressed the Society on "Control of Dust Explosions in Industrial Plants". At Camden, N.J., he inspected plans for new dust-collecting equipment at the RCA plant.

Harry E. Roethe and Paul W. Edwards spent the period from September 21 to October 26 in an extensive investigation of fires in cotton gins. Their itinerary included Arkansas, Texas, Louisiana, Mississippi, and Georgia, where they visited approximately 60 cotton gins and cottonseed warehouses. They interviewed State insurance commissioners, fire marshals, fire department chiefs, officials of rating and inspection bureaus, officials and staff members of cotton gin companies, insurance companies, and ginners' associations. They collected data upon which to base a study of this important subject.

Mr. Roethe attended the annual meeting of the Farm Fire Protection Committee in Chicago, November 29. The State Fire Marshals' Section of the National Fire Protection Association met in Chicago the same week, and Mr. Roethe had a number of conferences with the State Fire Marshals from Nebraska, West Virginia, Iowa, Illinois, and Indiana. He is a member of the American Society of Agricultural Engineers and assisted that Society in revising the report, "Farm Fire Prevention and Control". Before returning to Washington he visited a number of points in Wisconsin where he conferred with several persons on spontaneous heating of hay, motorized fire apparatus, electric fencing, and lightning protection systems.

E. J. Hoffman and M. A. Bradshaw, made a trip to Leonardtown, Md., on October 19 to investigate a case of spontaneous heating of soybean hay.

Richard L. Hanson went to Chicago on October 6 to confer with company officials on improving the tank holder for gas cylinders in the Bureau's laboratories. Later he joined Mr. Brown for conferences relating to tests to be made at the Corn Products Refining Company's plant in Argo, Illinois. On his way back to Washington Mr. Hanson talked with officials of the Mine Safety Appliances Company, Walter Kidde Company, duPont Company, Hercules Powder Company, and others with reference to dust explosion and laboratory safety matters.

On November 6 Mr. Hanson and Robert M. Baker left Washington for Cincinnati, Ohio, where they made a physical survey of the chemical research laboratories of Procter & Gamble Company at Ivorydale; the Monsanto Chemical Company at Dayton, Ohio, the Eli Lilly laboratories at Indianapolis, the Abbott Laboratories at North Chicago, Mellon Institute at the University of Pittsburgh, Pittsburgh, Pa., the Squibb Institute of Medical Research at New Brunswick, N.J., and the experiment stations of Hercules Powder Company and duPont Company at Wilmington, Dela.

D. J. Price and P. W. Edwards presented the work of the Bureau on dust explosion and fire prevention before a group of nearly 100 firemen representing the fire departments of Alexandria and nearby points in Virginia. Demonstrations of dust explosions were given and the Bureau's motion picture, "Dangerous Dusts", was shown.

Division of Mechanical Equipment

On January 5 R. B. Gray, Chief of the Division of Mechanical Equipment, delivered a paper entitled "Some Considerations in the Use of Rubber-Tired Machinery on the Orchard and Farm", at the annual meeting of the Maryland State Horticultural Society at Frederick. Much interest was manifested in the use of rubber tires. One grower stated he had two 20-horsepower tractors, each equipped with rubber tires of different make. When No. 1 tractor got stuck he could always pull it out with tractor No. 2, but the latter could pull more at the drawbar in normal going.

G. A. Cumings, in charge of fertilizer placement studies, reports that the principal conclusions from the cooperative studies on fertilizer placement with white beans in Michigan, were (1) fertilizer placed in a furrow with the seed (a farm practice) reduced the stand and failed to produce increased yields, (2) placement of the fertilizer in a band 1.5 inches deeper than the seed either directly under or 1.5 inches to the side produced the largest yield increases. Special Bulletin No. 296 has recently been published by the Michigan Station on this subject.

A motor-driven, recording-type, soil penetrometer has been constructed at the Tillage Machinery Laboratory at Auburn, Alabama, which shows considerable promise as a device for measuring the compactness of various soils. Tests are contemplated with this device to determine the comparative packing of soils by wheels of different types.

Several representatives of the Cleveland Tractor Company recently visited the Tillage Machinery Laboratory on matters pertaining to tillage problems of the southeastern states.

Messrs. Godtel and Reaves of the Allis-Chalmers Manufacturing Company visited the Tillage Machinery Laboratory where they inspected the testing equipment and discussed problems of cotton and sugar cane machinery with the men at the laboratory.

For the first time a single-seed-ball beet planter, designed and built by E. M. Mervine at Fort Collins, was used this year on a commercial basis. Results, just computed, show that this planter yielded 24 percent more single beet plants than the standard planter. These results are significant and are encouraging enough to make "mechanical thinning" of beets look practical.

A series of laboratory tests is being conducted at Davis, Calif., to determine the uniformity of seed distribution of single-seed-ball and conventional sugar-beet planters. The seed dropped by each planter as it is pulled along a runway is caught on boards covered with a thin coating of light cup grease. This has proved a very effective means of overcoming any bouncing or rolling of the seed as the balls are held at the exact point of drop and their position can be accurately determined.

Fertilizer Research Division

C. H. Kunsman, Chief, Fertilizer Research Division, returned to his office on October 24, from his trip to Europe which included visits to chemical plants and experiment stations concerned with the manufacture and testing of chemical fertilizers. His itinerary covered England, France, Holland, Norway, Sweden, Denmark, Germany, Switzerland and Italy. A few of the outstanding activities of this trip were visits to (1) the first successful direct nitrogen fixation plant in the world at Oppau, Germany, which was celebrating its twenty-fifth anniversary; (2) the Leuna Plant, Germany, the largest nitrogen fixation plant in the world, now having an estimated capacity of over one million tons of nitrogen annually; (3) the Norsk Hydroelectric plant at Rjukan, Norway, which is probably the most attractive and cleanly chemical fertilizer plant in the world, electric energy produced by water power being used throughout the plant; (4) the largest potash mine and processing factory in the world, the Kaiserroda plant, Germany, having a capacity equal to this country's entire annual importation of potash, over 200,000 tons of K_2O annually; (5) Dr. G. Fauser's research laboratory and nitrogen fixation plant at Novara, Italy, which was the first of its kind in Italy.

The First International Chemical Fertilizer Congress which met in Rome, October 3-6, was attended by about 200 delegates from 48 countries. Dr. Kunsman, in addition to being Chairman of the American delegation was also general reporter of Section II, on "Fertilization with Compound Fertilizers". He gave a report before the Congress and participated in the discussions on this question. He also submitted four national reports on the work of the Fertilizer Research Division, Bureau of Chemistry and Soils, U. S. Department of Agriculture, as follows: "Problems of Nitrogen", "Problems of Phosphatic Fertilizers", "Problems of Potash Fertilizers", and "Problems of Compound Fertilizers." Dr. Kunsman was appointed a Vice President of the First International Fertilizer Congress; and a President of Section III - Economics. He accepted membership on the Committee on Resolutions and presided at the general session on the morning of October 6, 1938.

Since Europe has led the world in many phases of fertilizer technology, a meeting of this kind presented an opportunity to discuss new processes and developments with the leading representatives of the countries making these contributions. The contacts established at this Congress, together with the information obtained during the inspection trip are proving of considerable importance in prosecuting the fertilizer researches.

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Carbohydrate Research Division

H. S. Paine, Chief of the Carbohydrate Research Division left December 17 for a visit to the Laurel Starch Plant, Laurel, Miss., where work on Dehydration of sweetpotatoes is being done. He will also visit the Houma, La., station in connection with plans for moving the station into the new Federal Building which will be turned over to the Department in the near future.

F. H. Thurber has just returned to Washington from Marshall, Texas, where he attended a conference of State, city, county and others interested in the possibility of establishing a sweetpotato starch factory at that point.

R. S. McKinney made a trip in November to the Agricultural Experiment Station at Gainesville, Florida, to confer with officials relative to the new field station to be established there for work on tung oil.

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Food Research Division

F. C. Blanck, In charge of the Food Research Division, attended the meeting of the American Public Health Association in Kansas City, Mo. on October 25-26. This meeting was also attended by Harry E. Goresline of the same division.

L. H. Bailey made a visit on December 1 to the New Standard Baking Company, to arrange with that firm for experimental work on improved methods for utilizing sweet potato starch in bakery products.

A paper on "The Canning of Freestone Peaches" was presented by A. M. Neubert, of the Food Research Division's Fruit and Vegetable By-Products Laboratory at Pullman, Washington, before the meeting of the Washington State Horticultural Association at Yakima, Washington, on December 5-7.

H. H. Mottern, who is in charge of the Pullman, Washington, field station of the Food Research Division was in Washington in October conferring with officials of the Division and Bureau relative to the work of his station, and the Regional Laboratory survey to which he was assigned. He also attended the meeting of the Frozen Foods Conference held at Knoxville, Tenn., on October 21-22.

R. S. Hollingshead, Assistant Chief of the Food Research Division, made a trip to New York City, on November 24, for the purpose of conferring with officials of the Sardik Company regarding the processing of food products.

V. H. McFarlane returned to his work in Washington, D. C., on December 7, after being stationed at the Laurel Starch Plant in Mississippi where he carried on investigations on the manufacture of starch in cooperation with the Carbohydrates Research Division.

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Protein and Nutrition Research Division

D. Breese Jones, Chief, Protein and Nutrition Research Division, attended the meeting of the American Public Health Association, which was held in Kansas City, Missouri, October 24 to 28, 1938. Dr. Jones was elected Chairman of the Food and Nutrition Section of the Association for the coming year.

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Naval Stores Research Division

C. F. Speh, Chief of the Naval Stores Research Division, attended the Convention of the National Paint, Varnish and Lacquer Association at Atlantic City, October 25 - 29. He spent November 26 - 31 at the Naval Stores Station, Olustee, Florida, conferring with members of the Station staff.

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J. O. Reed accompanied J. M. Ambler, Chief Chemist of the Sharples Corporation, to the Naval Stores Station, Olustee, Florida, November 21 to 31, to study the operation of the centrifuge in connection with gum cleaning.

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S. Palkin spent September 15 at Pittsburgh, Pa., conferring with representatives of Carnegie Institute regarding application of semi-micro, high-vac apparatus and with representatives of Mellon Institute on naval stores problems.

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W. D. Fohle spent October 20 and 21 in Philadelphia, Pa., making some detergent tests in the laboratory of Fels and Co.

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Recent Appointments (Indefinite or Probationary)

| | | |
|-----------------------|-------------------------|-----------------|
| Lillian Guest | Jr. Stenographer | Administration |
| George Thomas Hamner | Clerk | " |
| Mrs. Lenore Henig | Junior Typist | " |
| Frank J. LaParle | Assistant Messenger | " |
| David A. Colker | Jr. Chemical Engineer | Chem. Eng. Res. |
| Theodore R. Naffziger | Asst. Chemical Engineer | " " " |
| Jefferson B. Elliot | Senior Engr. Draftsman | " " " |
| Burton E. Davis | " " " | " " " |
| Elmer G. Wieland | " " " | " " " |

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| James V. Guarino | Engineering Draftsman | Chem. Eng. Res. |
| George P. Ogg | " " | " " |
| Lois E. Kuebler | Jr. Steno. (part-time) | Farm Land Development |
| Arthur Bramley | Collaborator | Fertilizer Research |
| Max Crocker Widger | Agent (Corvallis, Oregon) | Fiber Flax Processing |
| | | Investigations |
| Jay Glenn Bailey | Collaborator (Winter Haven, Florida) | Food Research |
| Oral A. Brown | Assoc. Electrical Engineer | Plans and Service |
| John C. Dalrymple | Sr. Electrical Draftsman | " " " |
| Robert A. Feagan, Jr. | Jr. Chemical Engr. (Olustee, Fla.) | Naval Stores Res. |
| Malcolm H. Lahr. | Chief Architectural Draftsman | Plans and Service |
| Thomas W. Miller | Assoc. Engineer (Specification Writer) | " " " |
| Leonard Peller | Asst. Mechanical Engineer | " " " |
| Mrs. Bessie Dean | | |
| Reinert | Jr. Stenographer | " " " |
| Tilly Sinnreich | Jr. Stenographer | " " " |
| Ray A. Small | Asst. Mechanical Engineer | " " " |
| Miriam F. Spiwack | Junior Typist | " " " |
| Milton Weinberg | Asst. Messenger | " " " |
| Bernard M. Baker | Mechanic (part time) (Baltimore, Md.) | Structures |
| Mayo K. Walden | Minor Scientific Helper | Food Research |
| Ward C. Suttle | Junior Laborer (wae) Urbana, Ill | Ind. Farm Prods. Res. |
| Loretta Schmidt | Senior Stenographer | " " " " |
| Jeanne Emery | " " | " " " " |

Recent Appointments (Temporary)

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| Mrs. Mary G. Harris | Asst. Clerk-Stenographer | Administration |
| Jane R. Coates | Jr. Clerk-Stenographer | " |
| Anne Goldfein | Senior Stenographer | " |
| Franklin E. Foster | Jr. Sugar Technologist (Baton Rouge, La.) | |
| Mrs. E. Gwendolyn Chambers | Asst. Clerk-Steno. | Carbohydrate Res. |
| Joseph C. Dorsey | Minor Mechanic (Fireman) | Chem. Eng. Res. |
| Herbert E. Keasley | " " " | Fertilizer Research |
| Bernard L. Bialkin | Asst. Mechanical Engineer | " " |
| Fred H. Bonwit | Chief Engineering Draftsman (Mechanical) | Plans and Service |
| Emile H. Brie | Chief Engineering Draftsman (Mechanical) | " " " |
| Laurie A. Cook | Assoc. Mechanical Engineer | " " " |
| Michael Cosentino | Sr. Engineering Draftsman (Mechanical) | " " " |
| Maurice E. Fine | Asst. Mechanical Engineer | " " " |
| Joel Koehl | Asst. Mechanical Engineer | " " " |
| Nathaniel Litvin | Sr. Mechanical Draftsman | " " " |
| Hugh D. O'Rourke, Jr. | Sr. Engineering Draftsman (Mechanical) | " " " |

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| Crawford B. Saunders | Assoc. Mechanical Engineer | Plans and Service |
| Elizabeth E. Van Zandt | Asst. Clerk-Stenographer | Reg. Res. Labs. |
| Bessie V. McCoy | " " " | " " " |
| Mrs. Ollie S. Sherby | " " " | " " " |
| Marie H. Conley | Senior Stenographer | " " " |
| Jeanette G. Goldstein | " " | " " " |
| Walter T. Ackerman | Sr. Research Agricultural Engineer (Durham, N.H.) | Rural Electrifi- cation |
| Truman E. Hienton | Prin. Research Agricultural Engineer (Lafayette, Ind) | " " |
| <u>Separations</u> | | |
| Hilda Friedman | Asst. Clerk-Stenographer | Administration |
| Mrs. Lula I. Yilek | Jr. Clerk (Resigned) | " |
| Frank J. Arrotta, Jr. | Asst. Messenger (Trans. to Off. of Secy.) | " |
| Helen Westhoff | Jr. Clerk-Steno. (Resigned) | Carbohydrate Res. |
| Edgar D. Burgor | Clerk | Administration |
| Wilson P. Green | Jr. Mechanical Engineer (Arlington Farm, Va.) | Structures |
| Mrs. Annie E. Whalen | Under Sci. Helper (Retired) | Food Research |
| Anthony M. Ambrose | Assoc. Pharmac. (San Fran- cisco, Calif.) | " " |
| Thomas E. Randall | Agent (Los Angeles, Calif) | " " |
| Philip B. Morlino | Jr. Laborer (Stoneville, Miss) | Cotton Ginning |
| Percy H. Williams | Asst. Structural Engineer | Plans and Service |
| Marion L. Davies | Asst. Clerk-Stenographer | Ind. Farm Prods.Res. |
| Mrs. Evelyn K. Anderson. | Jr. Clerk-Typist | Reg. Res. Labs. |
| Sarah E. Hood | " " " | " " " |
| Josephine Pogorzelski | " " " | " " " |

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Recent Articles by Workers in the Bureau of Chemistry and Soils
Appearing in Publications Outside the Department

- ALLISON, F. E. and MINOR, F.W. Coenzyme R. requirements of rhizobia. Soil Sci. 46(6): 473-483, Dec. 1938.
- ANDERSON, M. S. and BENGTSON, J. W. Influence of arsenical treatments upon rapid tests for soil phosphorus. Jour. Amer. Soc. of Agron. 30(10): 844-846, Oct. 1938.
- BALLS, A. K. and HALE, W. S. The preparation and properties of wheat proteinase. Cereal Chem. 15(5): 622-628. Sept. 1938.
- BALLS, A. K. Some modern aspects of enzyme catalysis. Jour. Wash. Acad. of Sci. 28(10): 425-433. Oct. 15, 1938.
- and MARTIN, L. F. Amylase activity of mosaic tobacco. Enzymologia, 5(4): 233-238. Oct. 21, 1938.
- and MATLACK, M.B. The enzymic hydrolysis of benzyl stearate and benzyl butyrate. Jour. Biol. Chem. 125(2): 539-543. Oct. 1938.

- BEAVENS, E. A. and GORESLINE, H. E. (With C. S. Pederson, N. Y. State Agr. Exp. Sta.) Preservation of grape juice. B. Pasteurization of grape and apple juices for storage or immediate fermentation. Food Res. 3(5): 467-479. Sept.-Oct. 1938.
- BICKFORD, W.G., DOLLEAR, F. G. and MARKLEY, K.S. The effect of hydroxyl groups and acetylation on the apparent diene values of soybean and other vegetable oils. Oil & Soap. 15(10): 256-259. Oct. 1938.
- BREWER, A. K. (With A. Lasnitzki, Univ. of Manchester). Isotopic constitution of potassium in normal and tumour tissue. Nature, 142(3594): 538-539. Sept. 17, 1938.
- and BRAMLEY, A. A geiger counter for beta-rays. Jour. Appl. Phys. 9(12): 778-780, Dec. 1938.
- BROTHER, G. H. and MCKINNEY, L.L. Protein plastics from soybean products. Action of hardening or tanning agents on protein material. Jour. Indus. & Engin. Chem. 30(11); 1236-1240. Nov. 1938.
- Development of soybean protein as a possible base for plastic material. British Plastics and Moulded Prod. Trader, 10(113); 248-251. Oct. 1938.
- BROWN, H. R. Control of dust explosions in industrial plants. Mech. Engin. 60(12): 936-938, Dec. 1938.
- DAVIDSON, J. and LeCLERC, J.A. Acid-base balance of cereals and some related food materials. Food Res. 3(4): 393-402. July-Aug. 1938.
- DOLLEAR, F. G., KRAUCZUNAS, P. and MARKLEY, K. S. Composition of a soybean oil of abnormally low iodine number. Oil & Soap. 15(10): 263-264. Oct. 1938.
- DROSDOFF, M. and MILES, E. F. Action of hydrogen peroxide on weathered mica. Soil Sci. 46(5): 391-395, Nov. 1938.
- ETCHELLS, J. L. Rate of heat penetration during the pasteurization of cucumber pickle. Fruit Prod. Jour. 18(3): 68-70. Nov. 1938.
- FLECK, E. E. and PALKIN, S. A new dihydroabietic acid from so-called pyroabietic acids. Jour. Amer. Chem. Soc. 60(11); 2621-2622. Nov. 1938.
- FORT, C. A. (With J. I. Lauritzen of the Bureau of Plant Industry) Determination of gums in juices from frozen cane. The Sugar Bul. 17(1): 17-20, Oct. 1938.
- HEID, J. L. Processing south Texas fruits and vegetables. Texas Farming and Citricult. 15(6): 12-13, Dec. 1938.
- HILBERT, G. E., PINCK, L. A. SHERMAN, M. S. and TREMEARNE, T.H. Organic phosphates. I. Fixation studies with three different soil types. Soil Sci. 46(5): 409-418. Nov., 1938.
- JACOB, K. D. Phosphate rock. The Min. Indus. 46: 459-477, 1938.
- JACOBS, P. B. Alcohol motor fuel in the United States. The Agric. Situation, 22(12): 20-23, Dec. 1938.
- JAMIESON, G. S. and MCKINNEY, R. S. Stillingia oil. Oil and Soap, 15(11): 295-296, Nov. 1938.
- KNIGHT, H. G. The importance of research in the cereal industry. Cereal Chem. 15(5): 573-580. Sept. 1938.
- LEWIS, A. J. and MARKLEY, K.S. The utilization of soybean oil in paints and varnishes. Paint, Oil and Chem. Rev. 100(22); Oct. 27, 1938.
- LOTHROP, R. E. Report on honey--Determination of levulose. Jour. Assoc. Off. Agr. Ehem. 21:419-420. Aug. 1938.
- MCKINNEY, R. S. Report on the thiocyanogen number of fats and oils. Jour. Assoc. Off. Agr. Chem. 21(3): 443-445, Aug. 1938.

- MARTIN, L. F. (With H. H. McKinney of the Bureau of Plant Industry) Tobacco mosaic virus concentrated in the cytoplasm. *Science*, 88 (2289): 458-459. Nov. 11, 1938.
- MAXWELL, L. R. The mechanism of delayed killing of maize seeds with x-radiation. *Proc. Natl. Acad. Sci.* 24(9): 377-384. Sept. 1938.
- MILNER, R. T. Progress of the U. S. regional soybean industrial products laboratory. 18th Ann. Meeting Amer. Soybean Assoc. Proc. 1938: 3-5. Sept. 1938.
- NAGEL, R. H., BECKER, H. C. and MILNER, R. T. The solubility of some constituents of soybean meal in alcohol-water solutions. *Cer. Chem.* 15(6): 766-774, Nov. 1938.
- PAINE, H. S., THURBER, F. H., and BALCH, R. T. (With W. R. Richee of Laurel, Miss., Starch Factory) Manufacture of sweet potato starch in the United States. *Jour. Indus. & Engin. Chem.*, 30(12): 1331-1348, Dec. 1938.
- PHILLIPS, M. A chemical examination of the lignin-like substance from the sporophores ~~Fomes~~ Fomes Pini (Thore) Lloyd (Trametes Pini (Thore) Fr.) *Jour. Assoc. Off. Agr. Chem.* 21(4): 678-684. Nov. 1938.
- and GOSS, M. J. The dehydrogenation of alkali lignin from corn cobs with selenium. *Jour. Assoc. Off. Agr. Chem.* 21(4): 632-635. Nov. 1938.
- PITMAN, A. L., McLAREN, J., DAVIS, F. H., and GROGGINS, P.H. Sodium chlorate production. *Chem. & Metall. Engin.* 45(12): 692-696, Dec. 1938.
- PRICE, D. J. Progress in farm and rural community fire prevention (Report of Committee on Farm Fire Protection). 42nd Ann. Meeting Natl. Fire Prot. Assoc. Proc. 32(1) 243-245. July, 1938.
- ROBINSON, W. O. The agricultural significance of the minor elements. *Amer. Fert.* 89(8): 5-8 and 24-26, Oct. 15, 1938.
- SHINGLER, G. P. One and one-half pieces of cotton batting effect a saving to producers. *Naval Stores Rev.* 48(20): 21. Aug. 13, 1938.
- Gum grades and standards. *Naval Stores Rev.* 48(18): 14. July 30, 1938.
- SHINGLER, G. P. Clean out your fire still flue. *Naval Stores Rev.* 48 (32): 15. Nov. 5, 1938.
- SMITH, A. K. and CIRCLE, S.J. Peptization of soybean proteins. Extraction of nitrogenous constituents from oil-free meal by acids and bases with and without added salts. *Jour. Indus. & Engin. Chem.*, 30(12): 1414-1418, Dec. 1938.
- STUART, L. S. Isolation of halophilic bacteria from soil, water and dung. *Food Res.* 3(4): 417-420. July-Aug. 1938.
- WARD, G. E., LOCKWOOD, L. B., TABENKIN, B. and WELLS, P. A. Rapid fermentation process for dextrolactic acid. *Jour. Indus. & Engin. Chem.* 30(11): 1233-1235. Nov. 1938.
- WHITTEMORE, E. R., REID, J.D., AND LYNCH, D.F.J. Nitric acid pulping. Analysis of the used-acid pulping liquors. *Jour. Indus. & Engin. Chem.* 30(10): 1192-1198. Oct. 1938.

- WIEBE, R. and GADDY, V. L. The compressibilities of hydrogen and of four mixtures of hydrogen and nitrogen at 0, 25, 50, 100, 200, and 300° C. and to 1000 atmospheres. Jour. Amer. Chem. Soc. 60 (10): 2300-2303. Oct. 1938.
- WULF, O. R. and DEMING, L. S. On the production of the ionospheric regions E and F and the lower-altitude ionization causing radio fade-outs. Terrestrial Magnetism and Atmospheric Elec. 43 (3): 283-298. Sept. 1938.
- A partial analysis of some infra-red absorption spectra of organic molecules in dilute solution. Jour. Chem. Phys. 6(11): 702-711. Nov. 1938.
- YANOVSKY, E. and KINGSBURY, R.M. Analyses of some Indian food plants. Jour. Assoc. Off. Agric. Chem., 21(4): 648-665, Nov. 1938.

the following additional words and a few new ones are
added to the original one hundred and twenty-five
words of the original manuscript. These additions have
been made by the author himself and have a tendency
to give a more detailed account of his life and work.
The additions are as follows: